What is claimed is:

1. A virtual computer system, comprising: a plurality of virtual computers operating on a physical computer having one or more CPUs; a load monitor for monitoring load conditions of said virtual computers from an occupation rate of said CPUs in each of said plurality of virtual computers and/or a length of queue for execution of process in each of said plurality of said virtual computers; a reallocation section for dynamically changing allocation of physical resources to said plurality of virtual computers; and a controller for searching physical resource allocation to said virtual computers based on load conditions obtained by said load monitor and for demanding reallocation to said reallocation section.

2. A virtual computer system, comprising: a plurality of virtual computers operating on a physical computer having one or more CPUs, each of the plurality of virtual computers having an OS for measuring an occupation rate of said CPUs and/or a length of queue for execution of process; and a hypervisor for controlling said virtual computers, for monitoring load conditions of said plurality of virtual computers from information measured by said OS, and for dynamically conducting physical resource allocation to said plurality of virtual computers according to the monitoring condition.

3. A virtual computer system, comprising: a plurality of

virtual computers operating on a physical computer having one or more CPUs, each of the plurality of virtual computers having an OS for measuring an occupation rate of said CPUs and/or a length of queue for execution of process; a hypervisor for controlling said plurality of virtual computers, the hypervisor having a reallocation section for dynamically changing physical resource allocation to said plurality of virtual computers; and a monitoring section operating on a first virtual computer among said plurality of virtual computers for acquiring information measured by OS operating on a second virtual computers among said plurality of virtual computers, and for demanding reallocation to said reallocation section based on the information.

4. A virtual computer system, comprising: a plurality of physical computers having one or more CPUs; a plurality of virtual computers composed on a first physical computers amongst said plurality of physical computers, the virtual computers operating on the physical computer, each of the plurality of virtual computers having an OS for measuring an occupation rate of said CPUs and/or a length of queue for execution of process; a hypervisor operating on the first physical computer for controlling said plurality of virtual computers, the hypervisor having a reallocation section for dynamically changing physical resource allocation to said plurality of virtual computers; and

a monitoring section operating on a second physical computer among said plurality of physical computers for acquiring information obtained by OS operating on said first physical computer, and for demanding reallocation to said reallocation

5   section based on the information.

5. A virtual computer system according to Claim 2, wherein said OS can increase or decrease CPUs under operating state, and said hypervisor conducts process to increase or decrease the number of operating CPUs based on said measured information.

10   6. A virtual computer system, comprising: a plurality of virtual computers operating on a physical computer having one or more CPUs; a load monitor for monitoring load conditions of said virtual computers from operating condition of said CPUs in each of said plurality of virtual computers; a reallocation

15   section for dynamically changing allocation of physical resources to said plurality of virtual computers; and a controller for searching physical resource allocation to said virtual computers based on load conditions obtained by said load monitor, and for demanding reallocation to said reallocation

20   section, the reallocation including an increase/decrease of the number of the operating CPUs.

7. A virtual computer according to Claim 1, wherein said controller generates a reallocation policy which increases a ratio of CPU allocation time offering to a virtual computer

having high load from another virtual computer depending on CPU occupation rate of the other virtual computer.

8. A virtual computer system, comprising: a plurality of virtual computers operating on a physical computer having one or more CPUs and main memory device; a load monitor for monitoring load conditions of said virtual computers from load condition of said main memory device in each of said plurality of virtual computers; a reallocation section for dynamically changing allocation of physical resources to said plurality of virtual computers; and a controller for searching physical resource allocation to said virtual computers based on load conditions obtained by said load monitor, and for demanding reallocation to said reallocation section.

9. A virtual computer system according to Claim 8, wherein the load conditions of said main memory device is obtained by frequency of paging and/or swap, and said reallocation section dynamically changes allocation amount of areas to said virtual computer of said main memory.

10. A virtual computer system, comprising: a plurality of virtual computers operating on a physical computer having one or more CPUs and a main memory device, each of the plurality of virtual computers having an OS for measuring load conditions of said main memory device; and a hypervisor for controlling said virtual computers, for monitoring load conditions of said

plurality of virtual computers from information measured by said

OS, and for dynamically conducting physical resource allocation

to said plurality of virtual computers according to the

monitoring condition.

5   11. A virtual computer system, comprising: a plurality

of virtual computers operating on a physical computer having

one or more CPUs and a main memory device, each of the plurality

of virtual computers having an OS for measuring load conditions

of said main memory device; a hypervisor for controlling said

10 plurality of virtual computers, the hypervisor having a

reallocation section for dynamically changing physical

resource allocation to said plurality of virtual computers; and

a monitoring section operating on a first virtual computer among

said plurality of virtual computers for acquiring information

15 obtained by OS operating on a second virtual computers among

said plurality of virtual computers, and for demanding

reallocation to said reallocation section based on the

information.

     12. A virtual computer system, comprising: a plurality

20 of physical computers having one or more CPUs and a main memory

device; a plurality of virtual computers composed on a first

physical computers amongst said plurality of physical computers,

the virtual computers operating on the physical computer, each

of the plurality of virtual computers having an OS for measuring

load conditions of said main memory device; a hypervisor operating on a first physical computer for controlling said plurality of virtual computers, the hypervisor having a reallocation section for dynamically changing physical

5　resource allocation to said plurality of virtual computers; and a monitoring section operating on a second physical computer among said plurality of physical computers for acquiring information measured by OS operating on said first physical computers, and for demanding reallocation to said reallocation

10　section based on the information.

13. A virtual computer system, comprising: a plurality of virtual computers operating on a physical computer having one or more CPUs, each of said plurality of virtual computers having an OS for controlling execution of an application

15　program; a load monitor for monitoring load conditions of said virtual computers from response time of a process of said application program in each of said plurality of virtual computers; a reallocation section for dynamically changing allocation of physical resources to said plurality of virtual

20　computers; and a controller for searching physical resource allocation to said virtual computers based on load conditions obtained by said load monitor and for demanding reallocation to said reallocation section.

14. A virtual computer system, comprising: a plurality

of virtual computers operating on a physical computer having one or more CPUs, each of said plurality of virtual computers having an OS for controlling execution of an application program; and a hypervisor for controlling said virtual computers, for monitoring load conditions of said plurality of virtual computers from response time of process obtained from said application program, and for dynamically conducting physical resource allocation to said plurality of virtual computers according to the monitoring condition.

15. A virtual computer system, comprising: a plurality of virtual computers operating on a physical computer having one or more CPUs, each of the plurality of virtual computers having an OS for controlling execution of an application program; a hypervisor for controlling said plurality of virtual computers, the hypervisor having a reallocation section for dynamically changing physical resource allocation to said plurality of virtual computers; and a monitoring section operating on a first virtual computer among said plurality of virtual computer for acquiring response time of process obtained by said application program operating on a second virtual computers among said plurality of virtual computers, and for demanding reallocation to said reallocation section based on the information.

16. A virtual computer system, comprising: a plurality

of physical computers having one or more CPUs; a plurality of

virtual computers composed on a first physical computers amongst

said plurality of physical computers, the virtual computers

operating on the physical computer, each of the plurality of

5   virtual computers having an OS for controlling execution of an

application program; a hypervisor operating on the first

physical computer for controlling said plurality of virtual

computers, the hypervisor having a reallocation section for

dynamically changing physical resource allocation to said

10   plurality of virtual computers; and a monitoring section

operating on a second physical computer among said plurality

of physical computers for acquiring response time of process

of the application program operating on said first physical

computer, and for demanding reallocation to said reallocation

15   section based on the information.

17. A virtual computer system according to Claim 13,

wherein said load condition monitoring section issues

transaction to the application program, and monitors load

conditions of said virtual computers based on a time required

20   to complete said transaction.

18. A virtual computer system, comprising: a plurality

of virtual computers operating on a physical computer having

one or more CPUs, each of said plurality of virtual computers

having an OS for controlling execution of an application

program; and a hypervisor for controlling said virtual computers, for issuing transactions to said application program, for monitoring load conditions of said plurality of virtual computers from response time of process obtained by monitoring a time required to complete the transaction, and for dynamically conducting physical resource allocation to said plurality of virtual computers according to the monitoring condition.

19. A virtual computer system, comprising: a plurality of virtual computers operating on a physical computer having one or more CPUs, each of the plurality of virtual computers having an OS for controlling execution of an application program; a hypervisor for controlling said plurality of virtual computers, the hypervisor having a reallocation section for dynamically changing physical resource allocation to said plurality of virtual computers; and a monitoring section operating on a first virtual computer among said plurality of virtual computer for acquiring response time of process obtained by monitoring a time required to complete transaction issued to said application program operating on a second virtual computers among said plurality of virtual computers, and for demanding reallocation to said reallocation section based on the information.

20. A virtual computer system, comprising: a plurality of physical computers having one or more CPUs; a plurality of

virtual computers composed on a first physical computers amongst said plurality of physical computers, the virtual computers operating on the physical computer, each of the plurality of virtual computers having an OS for controlling execution of an application program; a hypervisor operating on the first physical computer for controlling said plurality of virtual computers, the hypervisor having a reallocation section for dynamically changing physical resource allocation to said plurality of virtual computers; and a monitoring section operating on a second physical computer among said plurality of physical computers for acquiring time required to complete transaction issued the application program operating on said first physical computer, and for demanding reallocation to said reallocation section based on the information.

21. A virtual computer system, comprising: a plurality of virtual computers operating on a physical computer having one or more CPUs; a load monitor for monitoring load conditions of said plurality of virtual computers; a storing section for storing contents of a plurality of actions for changing physical resources allocated to virtual computers judged as high load by said load monitor; and a means for implementing said plurality of actions sequentially and for conducting physical resource reallocation according to contents of actions having effectiveness for lowering the load.

22. A virtual computer system, comprising: a plurality of virtual computers operating on a physical computer; a reallocation section for dynamically allocating physical resources of said physical computer to said plurality of virtual computers; a load monitor for collecting load of at least one of said virtual computers with a fixed interval and for detecting periodic changes of collected load data; and a controller for determining said physical resource allocation based on said periodic change of the load and for demanding periodical allocation of physical resources to said reallocation section.

23. A virtual computer system, comprising: a plurality of virtual computers operating on a physical computer; a reallocation section for dynamically allocating physical resources of said physical computer to said plurality of virtual computers; and a controller for deciding a priority order of allocation of physical resources to each virtual computers in said reallocation section according to customers and agreement conditions.

24. A virtual computer system according to Claim 23, wherein said controller has a reference to judge different overload according to customers and agreement conditions for every virtual computers.